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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,330	03/12/2004	Klaus Schippl	Q79686	6485
23373	7590	07/13/2004	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			HOOK, JAMES F	
			ART UNIT	PAPER NUMBER
			3752	

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/798,330

Applicant(s)

SCHIPPL, KLAUS

Examiner

James F. Hook

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

The incorporation of essential material in the specification by reference to a foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference. The amendment must be accompanied by an affidavit or declaration executed by the applicant, or a practitioner representing the applicant, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. See *In re Hawkins*, 486 F.2d 569, 179 USPQ 157 (CCPA 1973); *In re Hawkins*, 486 F.2d 579, 179 USPQ 163 (CCPA 1973); and *In re Hawkins*, 486 F.2d 577, 179 USPQ 167 (CCPA 1973).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schippl in view of Reimann. The patent to Schippl discloses the recited spacer for a long substrate 4 in the form of a corrugated metal tube in the interior of a long tube 5

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formed also of corrugated metal, wherein a superinsulation material 6 is provided between the substrate and tube between and around spacers 7,8 which can be formed of fiber reinforced plastic and can be disposed one on top of the other, where the material used for the spacers is high in mechanical strength and poor in thermal conductivity, where the area that the insulation is placed is evacuated. The patent to Schippl discloses all of the recited structure with the exception of providing a tube section between the inner and outer spacers, and forming the spacers as rings, although it can be considered that the spiral spacers of Schippl are equivalent to rings. The patent to Reimann discloses the recited insulated pipe comprising a spacer for a substrate 1, which can be provided with spacers 2,2' (see fig. 3), where the spacers are provided as spirals but can also be formed with rings 5,5', the spacers are fiber reinforced and provided around the substrate, a long tube 4' is provided outside of the substrate and spaced by the spacers that are formed on top of each other and with an intermediate tube section 4 provided between the spacers, where insulation is provided in all parts between spacers and tube sections, where Reimann shows that this structure is an alternative embodiment to an embodiment having only an inner substrate and outer long tube. The use of a specific thickness tube section or length of tube section is considered to be merely a choice of mechanical expedients where only routine experimentation would be required to arrive at optimum values. It would have been obvious to one skilled in the art to modify the spacer in Schippl by forming rings with the spacers which would provide more stability and prevent the insulation from being crushed between spirals, and to provide a tube section between the two spacers

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as suggested by Reimann as such is an alternate embodiment which would provide greater insulative properties and thereby prevent heat loss or gain.

Claims 1, 2, and 4-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gronemeyer in view of Schippl. The patent to Gronemeyer discloses the recited spacer for a long substrate 23 in the interior of a long tube 28, provided with spacer rings 22,25,26 spaced at various locations and supporting a tube section 24,27 within the interior of long tube 28 to provide air gaps that provide insulation to the system, the rings can be formed as split rings formed of a material that is strong but has low heat conductivity (col. 4, lines 28-33), the tube sections and long tube are made of metal, solid insulation can be used in gaps between layers of some parts of the article which suggests that Gronemeyer acknowledges that solid insulation can be provided, the rings seal the areas between layers, and in column 14, lines 14-24, the sheets can be formed not only of solid sheets but can also be formed of two or more sections where the clamshell formation of the layers can be formed of one or two pieces. The patent to Gronemeyer discloses all of the recited structure with the exception of providing a super insulation material between the spaced layers, forming the spacer rings of fiber reinforced plastic, forming the tube section of a specific thickness and length, and evacuating the area where the insulation is to be. The patent to Schippl discloses the recited structure above and it would have been obvious to one skilled in the art to modify the air insulation gaps in Gronemeyer by providing a super insulation that is provided in an evacuated area to provide better insulative properties to those of just trapped air, and to form the rings of any material which meets the properties set

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forth in Gronemeyer where Schippl teaches one such material for making spacer elements, specifically fiber reinforced plastic where such is known for it's strength and low thermal conductivity, where such would provide for a superior insulation sleeve which would save money due to lessened heat loss or gain. It is considered an obvious choice of mechanical design to form the tube section in Gronemeyer as modified to be of any thickness as such would merely be a choice of mechanical expedients and the thickness would be less important once the super insulation was provided in the air space in that such would provide for any loss due to a change in thickness of the tube section, as such is merely a choice of mechanical expedients which would require only routine experimentation to arrive at optimum values.

Conclusion

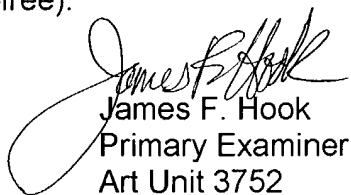
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Harvey, Isenberg, Tolan, Jr., Steans, Lefever, Uhlig, Hanley, Nicholson, Neumann and Calais disclosing state of the art insulated substrates with spacer elements.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (703) 308-2913. The examiner can normally be reached on Monday to Wednesday, work at home Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mar can be reached on (703) 308-2087. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


James F. Hook
Primary Examiner
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JFH